

THE AVENDT GROUP, INC.

ENGINEERS & SCIENTISTS

Mr. James J. Hahnenberg (SR-6J)
Remedial Project Manager
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

US EPA RECORDS CENTER REGION 5



501071

January 6, 2015

Re: **Monthly Progress Report, December 2014**
L.A. Darling Former Facility, NBFF OU2

Dear Mr. Hahnenberg,

Pursuant to Section XI. Order, paragraph 42 Progress Reports of the Administrative Order For Remedial Design and Remedial Action effective July 3, 2011 for the above referenced facility; this is the Monthly Progress Report for work completed during December 2014.

ACTIVITIES COMPLETED AND ANY PROBLEMS ENCOUNTERED -

1. **Remedial Action Phase 1, AS/SVE Installation Operation** - Operated a reported 31 days in the month of December 2014.
2. **Project Schedule** - The entire AS/SVE system is scheduled to be operational until May 2015 (total of 2 years) or until instructed by regulatory agencies.
3. **AS/SVE Monthly O&M Summary Report** - The December 2014 Monthly O&M Summary Report for the AS/SVE System dated January 6, 2015 is attached.

VALIDATED DATA RECEIVED AND NOT PREVIOUSLY REPORTED-

1. **Lab Data**- Groundwater sampling data for site wells were obtained in December 2014.
2. **Groundwater Sampling**- Groundwater sampling of the on-site wells is tentatively scheduled for May 2015 and will be added to the NBFF OU2 RI Table 4-6 entitled Groundwater Analytical Results and Criteria Comparison - Organics (ug/l).

RD/RA WORK PLANNED FOR NEXT 90 DAYS -

1. **On-Site Inspections**- Maintain liaison with RPM, MDEQ and OneSullivan Representative for scheduling of any on-site inspections.
2. **AS/SVE System Operation Improvements**- No changes are proposed for the AS/SVE system at the site.

ANTICIPATED PROBLEMS AND PLANNED RESOLUTIONS - None.

If you should have any questions or comments regarding this progress report, please do not hesitate to contact me at your convenience (312) 543-6257.

Respectfully,

The AVENDT GROUP, Inc.

Raymond J. Avendt
Raymond J. Avendt Ph.D. PE
Project Coordinator

Cc: B. Mead-O'Brien, MDEQ; S. Franzetti, NF LLP; T. Maley, OneSullivan, via email

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DRILLING & ENVIRONMENTAL CONTRACTING SERVICES

AN ENVIRONMENTAL & GEOTECHNICAL SERVICES COMPANY

January 6, 2015

Dr. Ray Avendt, Ph.D., P.E.
217 Madison Avenue SE
Grand Rapids, Michigan 49503

RE: AS/SVE Monthly O&M Summary Report – December
Former LAD Store Fixtures, Bronson, MI

Dear Dr. Avendt:

E&G Drilling & Environmental Contracting Services (E&G) is submitting this summary report for the December 2014 operation, maintenance and monitoring (O&M) of the air sparge (AS) and soil vapor extraction (SVE) remediation system installed at the former LA Darling Store Fixtures facility located at 616 N. Matteson Street, Bronson, Michigan. Startup, shakedown and operation of the system commenced on May 7, 2013. The AS system includes 9 sparge wells screened in the shallow zone and 9 sparge wells screened in the intermediate zone. Sparging alternates from the shallow wells to the intermediate wells on 10 minute cycles. The flow to each AS well is individually controlled and metered. The SVE system includes 9 SVE wells and the flow from each SVE well is individually controlled and metered and the total combined discharge flow is metered. The discharge from the SVE system is currently exempt from air permit under Rule 290 and, therefore the vapors captured by the SVE system are directly discharged unobstructed vertically upward. Water and condensate that collect in the SVE conduits are collected in a knock-out (KO) tank and intermittently pumped through a flow meter, in-line particulate filter and liquid phase GAC vessel prior to onsite discharge. The KO water discharge from the SVE system is exempt under Groundwater Discharge Rule 210. During the May 7 and 8 startup the SVE Effluent, Intermediate stage and Influent gas streams were monitored with a photo-ionization detection (PID) unit, and a sample of the Influent was also collected and delivered to an analytical laboratory for VOC analysis.

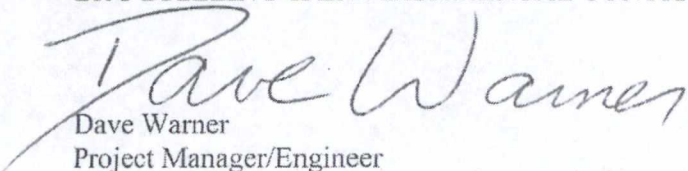
E&G performed a monthly site visit and O&M event on December 8. The O&M event included inspecting, monitoring, recording, adjusting, etc.; lubricant levels; leaks; AS & SVE flow rates; monitored conditions at the SVE flue gas effluent, intermediate and influent stages for each of the sparge zones; conditions at the 4 pressure probes via slack tube manometer; KO water and discharge; operation of the remote monitoring system auto-dialer; and, the general site condition.

The system operated for 31 days during the reporting period. As of December 31, 2014, approximately 225 lbs of VOC and 221 lbs of TCE, respectively, have been recovered by the SVE system.

Thank you for the opportunity to provide our environmental services to you. If you have any questions regarding this report, please contact me at 231-499-5479 or email at dave@eandgdrilling.com.

Sincerely,

E&G DRILLING & ENVIRONMENTAL CONTRACTING SERVICES



Dave Warner
Project Manager/Engineer

Cc: Chris Bade, ASI

Enclosures

Documentation of Monthly Discharge for Rule 290 Exemption from PTI
(Pursuant to R 201a of the Air Pollution Control Rules)
Former LAD Facility
606 N. Matteson St., Bronson, MI
December 2014

Sample(s) collected on: 7/15/14 (Summary table attached).

Compound	ITSL ($\mu\text{g}/\text{m}^3$)	IRSL ($\mu\text{g}/\text{m}^3$)	Controlled/ Uncontrolled Discharge (C/UC)	[A] Average Flow (cfm)	[B] *Average Concentration (mg/m^3)	[C] ⁽²⁾ Average Daily Recovery/ Discharge (lb./day)	[D] ⁽³⁾ Days Operating (days)	[E] ⁽⁴⁾ Pounds Recovered/ Discharged (lb./month)
VOC	NA	NA	C					
VOC	NA	NA	UC	200	17	0.306	31.0	9.5
TCE	2	0.2	C					
TCE	2	0.2	UC	200	17	0.306	31.0	9.5

Total Monthly VOC Discharged to Atmosphere (lb./month) ⁽¹⁾: 9.5

Total Monthly TCE Discharged to Atmosphere (lb./month) ⁽¹⁾: 9.5

Average Total Hourly VOC Emissions (lb./hr) ⁽¹⁾: 0.01

Average Total Hourly TCE Emissions (lb./hr) ⁽¹⁾: 0.01

Summary of VOC & TCE Recovered in Soil Vapor:

Year 2014 Total Pounds VOC Recovered (lb.): 122.5

Overall Total Pounds VOC Recovered to Date (lb.): 224.9

Year 2014 Total Pounds TCE Recovered (lb.): 119.5

Overall Total Pounds TCE Recovered to Date (lb.): 221.4

Summary of VOC & TCE Emissions:

Year 2014 Total Pounds VOC Discharged (lb.): 122.5

Overall Total Pounds VOC Discharged to Date (lb.): 168.6

Year 2014 Total Pounds TCE Discharged (lb.): 119.5

Overall Total Pounds TCE Discharged to Date (lb.): 165.6

NA - Not applicable.

ITSL - Initial Threshold Screening Level

IRSL - Initial Risk Screening Level

* Concentrations less than the method detection limits are assumed to be zero for use in the equations.

⁽¹⁾ Total uncontrolled discharge of VOC & TCE not to exceed 1,000 #/month & 20 #/month, respectively.

⁽²⁾ $\text{scfm} \times \text{mg}/\text{m}^3 \times 0.00008986 = \text{lb./day}$ (or: $[\text{A}] \times [\text{B}] \times 0.00008986 = [\text{C}]$)

⁽³⁾ System operated for 31 days during the month.

⁽⁴⁾ $\text{lb./day} \times \text{days/month operating} = \text{lb./month}$ (or: $[\text{C}] \times [\text{D}] = [\text{E}]$)

Summary of Vapor Flow Rates and Concentrations - December 2014
Soil Vapor Extraction System
Former LAD Facility, NBFF OU2
606 N. Matteson St., Bronson, MI

Date	Flow Rate (scfm)	UC-VOC (mg/m ³)	C-VOC (mg/m ³)	UC-TCE (mg/m ³)	C-TCE (mg/m ³)
1	200	17		17	
2	200	17		17	
3	200	17		17	
4	200	17		17	
5	200	17		17	
6	200	17		17	
7	200	17		17	
8	200	17		17	
9	200	17		17	
10	200	17		17	
11	200	17		17	
12	200	17		17	
13	200	17		17	
14	200	17		17	
15	200	17		17	
16	200	17		17	
17	200	17		17	
18	200	17		17	
19	200	17		17	
20	200	17		17	
21	200	17		17	
22	200	17		17	
23	200	17		17	
24	200	17		17	
25	200	17		17	
26	200	17		17	
27	200	17		17	
28	200	17		17	
29	200	17		17	
30	200	17		17	
31	200	17		17	
Totals:	6200	527		527	
Average *:	200	17		17	
*For total operating days -		31.0			

FORMER LA DARLING - BRONSON, MICHIGAN

SOIL VAPOR EXTRACTION SYSTEM - OPERATIONS & MAINTENANCE LOG

Technician: DW & SADate: 12-8-14Electric Meter Reading: 48316 (Kw-Hr)SVE SYSTEM: ON OFFHOURS METER READING: 21419Weather: o/cTemp: 32 + 1 Degree FSENSAPHONE: ON OFF

DAYS SINCE LAST VISIT: _____

ANY FAULT LIGHT(S) ON?: YES / NOVacuum Status Light?: ON/OK / OUT

IF YES, WHICH LABEL(S)?: _____

FAULT LITES TEST: OK / REPAIRProcess Area Temp: 80 Degree FFLOWRATE:
(SCFM)

PID:

(ppm)

VACUUM:

(inHg)

1	2	3	4	5	6	7	8	9
18	12	38	14	22	16	34	14	28
2	0	0	3.5	0	3.5	0	1	2

KILMER LOOP VALVE: 10 % OPEN / CLOSEDDILUTION AIR VALVE: 0 % OPEN / CLOSEDPre-SVE Blower Vacuum: 4 (in. Hg)Pre-HX GAS Temp.: 112 Degree FTotal Combined Flow: 19.5 (SCFM)KO Tank Liquid Level: 0 (Inches)KO Tank Transfer Pump: ON / OFF?KO Tank Flowmeter: 02622185 (Gallons)FILTER ELEMENT CHANGEOUT?: YES / NO?Any Leaks? YES / NO?Pre-HX Pressure: 0.5 (Record psi)

SVE VGAC PRESSURE READINGS:

(psi)

VGAC TANK 1:

(lead / lag?)

VGAC TANK 2:

(lead / lag?)

SVE PID MEASUREMENTS: (ppm) + Qualitative Olfactory Check (Odor? If yes, describe)

PROCESS ROOM:

0.0no odor

EFFLUENT:

3.6mild odor

INTERMEDIATE/MIDFLUENT:

5

INFLUENT: (Shallow)

12

(Deep)

GAS SAMPLES (1/2 Liter Tedlar Bags, Only 72-Hours Hold Time, 8260+ DEQ LIST):

VALVES CLOSED?

EFFLUENT:

YES / NO?

1 OR 2 BAGS?

YES / NO?

INTERMEDIATE/MIDFLUENT:

YES / NO?

1 OR 2 BAGS?

YES / NO?

INFLUENT:

YES / NO?

1 OR 2 BAGS?

YES / NO?

ANY VISIBLE EMISSIONS FROM STACK?:

YES / NO?

SVE CARBON CHANGEOUT?:

YES / NO?

VGAC TANK:

1 OR 2?

COMMENTS / NOTES:

